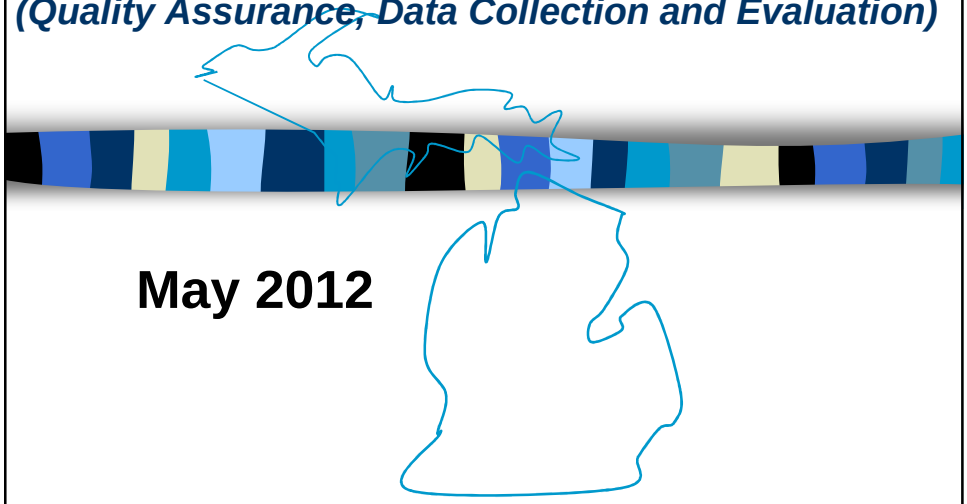
Perinatal Regionalization Work Group

(Quality Assurance, Data Collection and Evaluation)



May 2012

Members

- **Padu Karna, MD – Co-Chair**
- **Cheryl Gibson-Fountain, MD – Co-Chair/ Chair OB group**
- **Bob Schumacher, MD – Chair Neonatal Group**
- **Trudy Esch, MDCH staff support**
- **Lori Charbonneau**
- **Mallory Doan**
- **Linda Fedewa**
- **Wendy Finsterwald-Watts**
- **Gail Heathcote**
- **Ron Hubble**
- **Ashleigh Lipsey**
- **Patti McKane**
- **Susan Moran**
- **Mary Beth Tygielski**
- **Sam Watson**
- **Mary Wehrly**
- **Joy Wright**

Workgroup # 3 Charge

To make recommendations to MDCH regarding:

- **Quality improvement**
- **Data collection**
- **Evaluation for a statewide perinatal coordinated system.**

Specific Tasks

1. **Determine available data for perinatal care**
2. **Determine quality improvement processes in place.**
3. **Identify data quality improvement (QI) gaps**
4. **Determine evaluation methods for the statewide perinatal coordinated system**

Why Perinatal Care:

- **Despite an increased focus on improving care, the U.S. perinatal health care system does not always deliver safe, high quality care for all women and infants.**
- **In some cases, gaps still exist between best evidence and routine practice.**
- **In addition, pregnant women and neonates continue to encounter unnecessary risks as a result of their interactions with the health care system.**
- **Interventions to improve quality and safety have shown promise in changing practice in perinatal medicine.**

Quality Improvement

1. Determine available data for perinatal care

2. Determine quality improvement processes in place

Perinatal care in Michigan

Hospitals with OB care:

A) 2005 Survey: (72%)
98 Birth hospitals
- Level 1 = 39
- Level 2 = 19
- Level 3 = 13

B) 2012:
83 Birth hospitals

- **Newborn care:**

2012:
- Level 1 & 2 = 64
- Level 3 = 20

Level 3C = 3
Level 3B = Majority
Level 3A = Few

What QI has been suggested?

- Joint Commission Perinatal Care Core Measures
- National Quality Forum Perinatal Quality Measures
- HEDIS (Healthcare Effectiveness Data & Information Set)
- TIOP III (March of Dimes)

Current Quality Improvement

2012 Survey – MHA

1. Birth hospitals: 85% of respondents reported
   - Elimination of non-medically indicated (elective) deliveries before 39 weeks gestational age
2. Neonatal: Hospitals with an NICU:
   - Decrease nosocomial infections at 15/17 VON-NICU
   - Seventeen out of twenty NICUs in Michigan participate with VON (Vermont Oxford Network).

Perinatal Care Quality Measures

Obstetric
83 delivering Hospitals

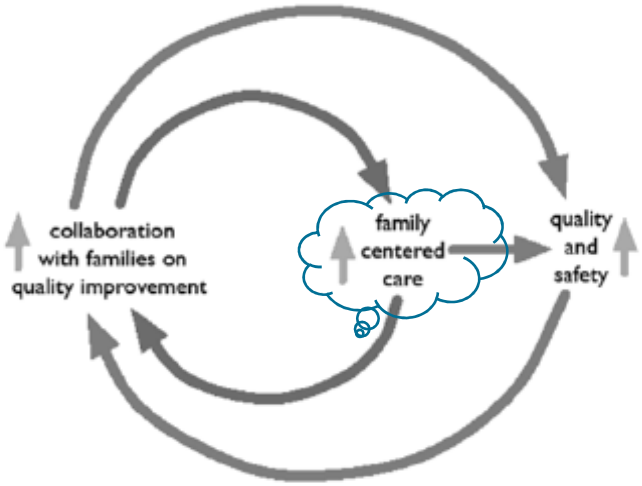
Neonatal
20 NICUs & 64 Level I and Level II nurseries

Measures (Sources)	Gaps	Measures (Sources)	Gaps
1. Ante-partum care a. Entry into prenatal care (VR + HEDIS) b. Urine drug screens ---------- Not collected c. HIV testing in prenatal care (BC)-- Needs details d. 17-OH progesterone prophylaxis after --- New spontaneous singleton premi birth e. Exclusive breastfeeding (BC) -- Exclusive not collected 2. Intra-partum care a. Elective births before 39 weeks; (MHA) b. Cesarean birth rate for first-time; (VR) c. Prophylactic antibiotics prior to cesarean;(BC)- Non- specific d. Episiotomy rate; ---------- Not collected e. Appropriate use of antenatal steroids; (BC)-- Assessment of Appropriate f. Exclusive breastfeeding (BC) --- Exclusive not collected 3. Post-partum care a. Appropriate prophylaxis for DVT --- Not collected for women having cesarean birth; b. Exclusive breastfeeding (BC) --- Exclusive not collected c. Maternal mortality rate (VR) ------ Cause and site d. Disparity ratios (VR) ------- Which parameters		1. Term / Near Term Newborn a. Neonatal mortality (VR) b. Congenital anomalies(VR)--Early detection not measured c. Appropriate Transfer to NICU; -------- Not Measured d. First hour Hypothermia at TN - Not recorded in BR e. Exclusive breast feeding: (BC)--- Exclusive not recorded f. Any Breast milk feeding at discharge (BC) g. Hepatitis immunization (BC) ------ Follow up of denials 2. Sick Term / Near Term Newborn a. First hour Hypothermia ---- Not recorded in BR b. HIE – high morbidity (MIDB) --- Severity not recorded c. Use of iNO – High Cost (MIDB) d. Birth Trauma – Neonatal (MIDB) e. Nosocomial Infections (MIDB) ------ Reliability of data (Reliable from 2011 – NHSN data) 3. Preterm Infants (VLBW) a. First hour Hypothermia at NICU--Not recorded in BR b. Nosocomial Infections (MIDB) -- Reliability of data c. Timing of first surfactant administration - Not recorded d. Timely ROP screening for preterm (VON) --Timely not collected e. Growth velocity for VLBWI (VON)	

Other gaps in perinatal care

1. The process of implementation of QI is often not measured, but it is critical to the success and sustainability of improvement. For example, the use of check list (process) in an operating room has improved safety (outcome). Team work is another process often not measured.
2. Available resources (staff, time, finance, QI tools, literature) are often limited at individual institutions.
3. There are a small number of birth hospitals (14.5%) and NICUs (15%) in the state of Michigan that are not engaged in state wide or national quality consortiums. The state should facilitate their collaboration.

Families and Quality Improvement



Effective Regional Perinatal Care

Statewide implementation will require establishment of:

- **Effective health care systems**
- **Administrative routines**
- **Evaluation of its effectiveness**

Education

The committee notes that in order to impact quality care, perinatal teams (leaders and bedside staff) need to learn:

1. Principles of quality improvement
2. Safety culture
3. Team work and communication
4. Core concepts of patient and family centers care

Data Collection

- A Perinatal Registry is recommended.
- An infrastructure capable of supporting
  - Outcome measures
  - Evaluation of care processes
- Registry will play a vital role in tracking quality care and cost.
- Significant data are available at this time in different data files – Vital records, MI inpatient database (MIDB), MHA (Keystone+) etc. Good IT support will help.

Data Collection for Perinatal Registry

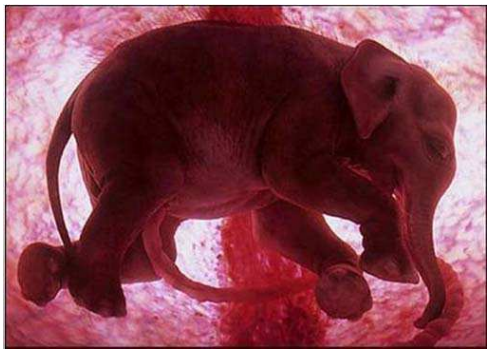
Registry should have Performance Metrics:

- Based on availability, timeliness, validity, reliability and relevance.

- Useful to clinicians, hospital administrators, EMS, MDCH and other stakeholders.

Effective Regional Perinatal Care

- Education
- Data
- Resources



Resources for MI Regional Perinatal Care

Resources are essential to reestablish Michigan regional perinatal care with active quality improvement initiatives on a continuous basis.

1. **State level: The State should allocate resources necessary for:**
   - **Safe and effective perinatal QI**
   - **Data submission from birth hospitals throughout the state.**
2. **Hospital level: Recommend perinatal center quality support.**

Principles for evaluation of Perinatal system should include following

1. **Based on Seven key themes for quality improvement [family centered, safe, effective, equitable, timely, efficient, socially and environmentally responsible] (® Horbar JD, IOM)**
2. **Measures should be of high value, valid and amenable to improvement.**
3. **Reducing variance in process and outcomes (TIOPS III)**
4. **Transparency and aggregate data sharing to promote improved care**

Evaluation of MI Regional Perinatal System

1. Perinatal levels of care: verifiable by a State department agency based on *Perinatal Regionalization (Michigan 2009)*.
2. Data for core outcomes: The availability of data and effectiveness of the measures (to start with the Joint Commission's five Perinatal Care measures).
3. Annual analysis of at least 1-2 regional perinatal quality measure processes across the state of Michigan.

Evaluation of MI Regional Perinatal System

4. Regional leadership:
   - Provide education (case reviews & root cause analysis process)
   - Improve the health care of women and infants.
5. Sharing of aggregate data with the goal of improvement and consistency of care for the Michigan perinatal population.
6. Engaging Family to partner and improve care: essential for improvement.

State wide Perinatal Quality Improvement Process: Breast Feeding rate

1. **Breastfeeding and human milk are the reference normative standards for infant feeding and nutrition (AAP Policy Statement, 2012, Surgeon General's Call to Action, 2011).**
2. **Breast feeding impacts short term as well as long term outcomes for infants and mothers.**
3. **The practice of breastfeeding practice extends across:**

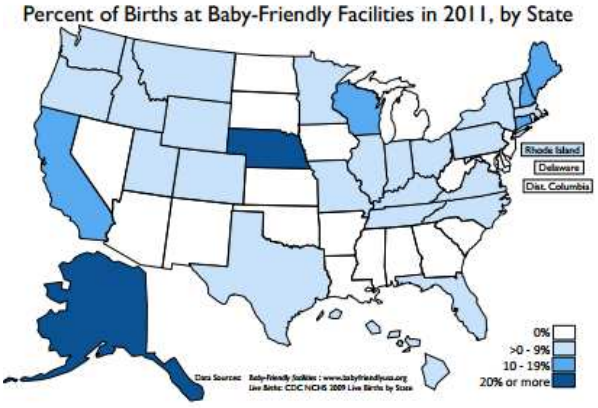
   - Perinatal providers - Nurses, Physicians and mid level providers

   - Different sites of care - OB office, hospital – ante-partum, labor & delivery, mother / baby, NICU, and post-natal care at pediatrician and OB office staff.

*** Committee to workout details**

Breast Feeding Report Card

United States & MI, 2011



MI-BF (Ever)	BF @ 6M	Exclusive BF@ 6M
69%	43%	16%

CDC data - August 2011

Summary:

- **Current perinatal QI**
- **Available database, QI Gaps and Core QI measures**
- **Process to achieve successful regionalized quality care**
- **Evaluation of regionalized coordinated care**

Reference

1. Horbar, J.D., Soll, R.F., & Edwards, W.H. (2010). The Vermont Oxford Network: a Community of practice. Clinics in Perinatology (37). Pp. 29-47. doi:10.1016/j.clp.2010.01.003 Available: http://www.vtoxford.org/about/VONCommunityofPractice.pdf
2. Profit J., Gould J.B., Zupancic, J.A.F. (2011). Formal selection of measures for a composite index of NICU quality of care: Baby-Monitor.: Journal of Perinatology (31), pp. 702-710.
3. Engelberg Center for Health Care Reform (2010, June). How registries can help performance measurement improve care; White paper : The Brookings Institute. Available: http://www.rwjf.org/files/research/65448.pdf
4. Institute of Medicine (2001). Crossing the Quality Chasm: A New health system for the 21st century. Washington, DC: National Academy Press.

Questions